

In the Claims

1. An apparatus for removing solid particles from a liquid, comprising:
a substantially round shell having an inlet and an outlet, said outlet
elevated from said inlet, said round shell defining a particle extraction area;
5 an outlet flume extending from said outlet and having a floor
overhanging a portion of particle extraction area; and
a particle collection area located centrally of said particle extraction
area.

10 2. The apparatus according to claim 1, wherein said inlet is configured to
direct liquid tangentially into said round shell.

15 3. The apparatus according to claim 1, wherein said outlet is configured
to receive liquid tangentially from an inside perimeter of said round shell.

20 4. The apparatus according to claim 1, wherein said inlet is located
within said shell and said apparatus comprises an inlet flume extending upstream
from said inlet and penetrating said rounded shell and having a bottom substantially
at a same elevation as a bottom of the particle extraction area.

25 5. The apparatus according to claim 4, wherein said inlet flume
comprises a tunnel extending into said particle extraction area from an inside of
said rounded shell to a said inlet.

6. The apparatus according to claim 5, wherein said outlet flume extends inside the rounded shell supported on said tunnel.

5 7. The apparatus according to claim 1, wherein said inlet and said outlet are arranged for tangential fluid flow with respect to said rounded shell.

10 8. The apparatus according to claim 7, wherein said outlet comprises an outlet opening to said outlet flume located inside said rounded shell, said outlet opening having a bottom floor located at an elevation substantially at a mid elevation of said rounded shell.

15 9. The apparatus according to claim 8, wherein said inlet is connected to an inlet tunnel within the rounded shell having a top plate located at an elevation substantially at a mid elevation of said rounded shell.

10. The apparatus according to claim 1, comprising a floor connected around a bottom of said round shell, said floor sloping toward said particle extraction area.

20 11. An apparatus for removing solid particles from a liquid, comprising: a substantially round shell having an inlet and an outlet, said outlet elevated from said inlet, and a floor, said floor and said shell defining a particle extraction area, said inlet and outlet arranged to circulate liquid around an inside perimeter of said shell from said inlet to said outlet;

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said outlet having a width substantially equal to a width of said inlet;
and

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a particle collection area located centrally of said particle extraction
area.

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12. The apparatus according to claim 11, wherein said inlet is configured
to direct liquid tangentially into said round shell.

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13. The apparatus according to claim 11, wherein said outlet is configured
to receive liquid tangentially from an inside perimeter of said round shell.

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14. The apparatus according to claim 11, wherein said apparatus
comprises an inlet flume connected to said inlet and penetrating said rounded shell,
and said inlet flume having a bottom substantially at a same elevation as a bottom
of the particle extraction area.

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15. The apparatus according to claim 14, wherein said inlet flume
comprises a tunnel extending into said particle extraction area from an inside of
said rounded shell to said inlet.

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16. The apparatus according to claim 15, wherein said outlet flume
extends inside the rounded shell supported on said tunnel.

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17. The apparatus according to claim 11, wherein said inlet and said
outlet are arranged for tangential fluid flow with respect to said rounded shell.

18. The apparatus according to claim 17, wherein said outlet comprises an outlet opening to said outlet flume located inside said rounded shell, said outlet opening having a bottom floor located at an elevation substantially at a mid elevation of said rounded shell.

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19. The apparatus according to claim 18, wherein said inlet is extended by an inlet tunnel within the rounded shell having a top plate located at an elevation substantially at a mid elevation of said rounded shell.

10 20. The apparatus according to claim 11, wherein said floor is sloped toward said particle collection area.